

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-6. (cancelled).

1 7. (previously presented) An iris camera module ,
2 comprising:
3 an image pickup optical system for picking up an image of
4 the iris;
5 a target optical system for displaying a target for the
6 eye; and
7 a target screen where the target is displayed, wherein
8 the target optical system and the image pickup optical
9 system are integrated into a single unit, and
10 wherein
11 the image pickup optical system includes:
12 an infrared illuminating section for irradiating an
13 infrared ray onto the eye,
14 an image pickup section for picking up the image of
15 the iris by detecting the infrared ray reflected
16 on the eye, and
17 an image pickup optical section for guiding the
18 infrared ray reflected on the eye to the image
19 pickup section; and
20 wherein the target optical system includes a target
21 optical section for guiding the image of the target
22 on the target screen to the eye; and further
23 wherein
24 the image pickup section includes:
25 an image pickup element for picking up the image of
26 the iris,

27 a storage for storing a reference iris information,
28 and
29 a comparator section for comparing an information
30 based on the image of the iris picked up by the
31 image pickup section with the reference iris
32 information to output the comparison result as
33 to whether matching is obtained; and
34 wherein the reference iris information can be overwritten
35 only a predetermined number of times in the storage.

Claims 8-14 (canceled).

1 15. (previously presented) An iris camera module
2 comprising:
3 an image pickup optical system for picking up an image of
4 the iris of a user; and
5 a target optical system including a target screen for
6 displaying a target for aligning the eye of the
7 user, wherein the target optical system and the
8 image pickup optical system are integrated onto a
9 common substrate; wherein the image pickup optical
10 system includes:
11 an infrared illuminating section for irradiating an
12 infrared ray onto the eye,
13 an image pickup section for picking up the image of
14 the iris by detecting the infrared ray
15 reflected on the eye, and
16 an image pickup optical section for guiding the
17 infrared ray reflected on the eye to the image
18 pickup section,
19 and further wherein the target optical system includes a
20 target optical section for guiding the image of the
21 target on the target screen to the eye; and wherein
22 the image pickup section further includes:

an image pickup element for picking up the image of
the iris;
a storage for storing a reference iris information;
and
a comparator section for comparing an information
based on the image of the iris picked up by the
image pickup section with the reference iris
information to output the comparison result as
to whether matching is obtained,
wherein the reference iris information can be overwritten
only a predetermined number of times in the storage.

16. (previously presented) An iris camera module
comprising:

an image pickup optical system for picking up an image of
the iris of a user; and
a target optical system including a target screen for
displaying a target for aligning the eye of the
user, wherein the target optical system and the
image pickup optical system are integrated onto a
common substrate; wherein the image pickup optical
system includes:
an infrared illuminating section for irradiating an
infrared ray onto the eye,
an image pickup section for picking up the image of
the iris by detecting the infrared ray
reflected on the eye, and
an image pickup optical section for guiding the
infrared ray reflected on the eye to the image
pickup section; and wherein
the target optical system includes a target optical
section for guiding the image of the target on
the target screen to the eye;
wherein the image pickup section further includes:

23 an image pickup element for picking up the image of the
24 iris; and
25 a connector section for coupling an external circuit
26 detachable from the image pickup section,
27 and wherein the external circuit includes:
28 a storage for storing a reference iris information;
29 and
30 a comparator section for comparing information based
31 on the iris picked up by the image pickup
32 section with the reference iris information to
33 output the comparison result as to whether
34 matching is obtained.

Claims 17-18 (canceled).

1 19. (previously presented) An iris camera module
2 comprising:
3 an image pickup optical system for picking up an image of
4 the iris of a user, said image optical system
5 including:
6 an illuminating section for irradiating a ray onto
7 the eye;
8 an image pickup section for picking up the image of
9 the iris by detecting the ray reflected on the
10 eye; and
11 an image pickup optical section for guiding the ray
12 reflected on the eye to the image pickup
13 section;
14 a target optical system for displaying a target for
15 aligning the eye of the user, said target optical
16 system including:
17 a target screen;
18 a target optical section for guiding the image of
19 the target on the target screen to the eye; and

20 a screen illuminating section for illuminating the
21 target screen with either ambient light or
22 artificial light;
23 a storage for storing a reference iris information; and
24 a comparator section for comparing an information based
25 on the image of the iris picked up by the image
26 pickup section with the reference iris information
27 to output the comparison result as to whether
28 matching is obtained, wherein
29 the reference iris information can be overwritten only a
30 predetermined number of times in the internal
31 storage.

1 20. (previously presented) An iris camera module
2 according to claim 19, wherein the image pickup optical
3 section and the target optical section include a common half
4 mirror for reflecting to guide the infrared ray reflected on
5 the eye to the image pickup section and guiding the image of
6 the target on the target screen to the eye without reflecting
7 the image.

1 21. (previously presented) An iris camera module
2 according to claim 19, wherein the image pickup optical
3 section and the target optical section include a common half
4 mirror for guiding the infrared ray reflected on the eye to
5 the image pickup section without reflecting the infrared ray
6 and reflecting to guide the image of the target on the target
7 screen to the eye.

1 Claims 22-38 (deleted).

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